

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

ppu



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,817	06/05/2001	Keith Roller	Econ.02USU1	5927
27479	7590	08/16/2004	EXAMINER	
COCHRAN FREUND & YOUNG LLC 3555 STANFORD ROAD SUITE 230 FORT COLLINS, CO 80525			CHANNAVAJALA, SRIRAMA T	
			ART UNIT	PAPER NUMBER
			2177	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,817

Applicant(s)

ROLLER ET AL.

Examiner

Srirama Channavajjala

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are acceptable for examination purpose only.

Priority

2. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged based on provisional application serial number: 60/209,494 filed on June 06, 2000.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jagadish et al., [hereafter Jagadish], US Patent No. 5987108 in view of Rassen et al., [hereafter Rassen], US Patent No. 6189004.

4. As to Claim 1, Jagadish teaches a system which including 'a configuration component for instancing, in each of said records database, specifications for data associated with each event involving a customer communication' [col 2, line 37-39, line 49-54];

'an extractor routine communicatively coupled with each of said contact records databases, said extractor routine extracts data concerning each event involving a

Art Unit: 2177

customer communication from each of said contact records databases' [col 2, line 61-67, col 3, line 1-9], Jagadish is directed to telephone business, more specifically telephone billing to the customers, customer communication from each contact records databases corresponds to customer profile database communicating to the billing analysis system as detailed in fig 1b;

'a transform routine communicatively coupled with said extractor routine, said transform routine receives data extracted by said extractor routine and transforms the data extracted by said extractor routine into data formatted according to an analysis protocol independent of protocols of said records databases' [col 2, line 33-35, col 3, line 11-27, fig 1a-b], Jagadish specifically teaches real-time access to summary information with respect to billing analysis system, further it is noted that automatic message account records (AMA) are connected to the billing analysis system as detailed in fig 1-b;

'a central database communicatively coupled with said transform routine, said central database receives and stores data transformed by said transform routine' [col 2, line 1-3, col 3, line 44-49], central database corresponds to fig 1b, element 156, CDD;

'an analysis server communicatively coupled with said central database, said analysis server accesses and synthesizes said data in response to inquiries concerning customer communication events and generates reports of the synthesis' [fig 1a-b, col 2, line 2-12, line 19-27], Jagadish specifically teaches billing analysis system connected to customer profile database as well as CDD for generating necessary summary information for a particular customer, analysis server communicatively coupled with said

Art Unit: 2177

central database corresponds to billing analysis system coupled to CDD as detailed in fig 1a-b, generating reports corresponds to generating summary information, 'storing said data' [col 3, line 24-27].

It is however, noted that Jagadish does not specifically teach 'central database is specifically modeled on star schema'. On the other hand, Rassen disclosed data mart, more specifically organizing data in the dimensional data mart and typically data is organized as a star schema [see col 2, line 27-30].

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Rassen et al. into Jagadish et al. telephone billing with customer defined budgeting because both Jagadish and Rassen are directed to data querying, data analysis, more specifically Jagadish is directed to telephone call processing, billing analysis and generating summary information based on specific customer profile [see fig 1a-b, Abstract], while Rassen is directed to datamart, more specifically automatically defining query interface for data mart where data is organized according to a star schema.

It would have been obvious to one of the ordinary skill in the art at the time applicant's invention to modify Jagadesh's reference, more specifically modifying fig 3 to incorporate standard data mart star schema of Rassen [see fig 1fig 3A] because that would have allowed users of Jagadesh automatically query database, at the same time

Art Unit: 2177

allows to define measure and related information bring the advantages of consistency in use of data from business to business as suggested by Rassen [see col 3, line 2-14].

5. As to Claim 2, most of the limitations of this claim have been noted in the rejection of Claim 1 above. In addition, with respect to the claimed feature Rassen disclosed 'star schema of the central database comprises central fact tables' [col 2, line 27-36, line 66-67], Rassen teaches datamart that specifically has star schema, further standard star schema is a fact table that contains measure data [see col 2, line 27-29], also it is noted that Rassen teaches schema definition as detailed in fig 3A-6C, specifically establishing entity relationship between various tables that including fact table(s) and their respective attributes and like

It is however, noted that both Jagadesh and Rassen do not specifically teaches 'ten dimension tables, eleven dimension tables data, six dimension tables data, three dimension table data, four dimension tables data, nine dimension table data, although Rassen's fig 3 specifically teaches various fact table element 304, dimension table element 306, fig 3B.

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to create any number of fact table(s) to have specific number of attributes or set of attributes and related dimension tables data because Rassen specifically teaches star schema in datamart that supports fact tables and dimensional tables and also specifically defined schema and entity and relational between various

Art Unit: 2177

tables as detailed in fig 3, thus bring the advantages of large amount of data storing, querying and further maintaining consistency of data as suggested by Rassen [col 3, line 2-15].

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claim 3 is rejected under 35 U.S.C. 102(e) as being anticipated by Rassen et al., [hereafter Rassen], US Patent No. 6189004.

7. As to Claim 3, Rassen teaches a system which including 'defining specifications for data' [col 6, line 50-67, col 7, line 1-8], Rassen specifically teaches definition of

Art Unit: 2177

schema for the data mart as detailed in fig 1 that including metadata, further meta data including many different types of data as detailed in col 6, line 50-53;

'imposing the specifications on one or more communication contact system' [col 6, line 64-67] , Rassen specifically teaches star schema that is used for business processes;

'collecting in said communication contact system, data complying the specifications' [9-22], Rassen specifically teaches semantic definitions that defines how that extracted data should be converted when it is loaded into the datamart that corresponds to complying the specifications;

'extracting from each of the communication contact system all data complying with the specification' [col 7, line 23-28];

'transforming all extracted data to transformed data in a stardardized format' [col 7, line 60-67, col 10, line 39-45], Rassen specifically teaches data is converted according to predefined data semantics;

'storing all transformed data in defined logical tables in a single database' [col 10, line 48-60], Rasser specifically suggests tables are stored in datamart, further well formed datamart have entity relationship, and logical relation between tables as detailed in col 10, line 50-60, single database corresponds to datamart fig 1, element 150;

'accessing the transformed data from the single database' [col 9, line 64-67, col 10, line 1-11], Rasser specifically suggests performing queries on the schema, accessing datamart as detailed in col 10, line 1-11];

Art Unit: 2177

'processing the transformed data according to inquiries by end users' [fig 9-11, col 11, line 18-24], Rasser specifically teaches user interface where user executing the queries and reports;

'transmitting the results of the processing to end users' [see fig 1, 9-11].

Conclusion

The prior art made of record

- a. US Patent No. 5987108
- b. US Patent No. 6189004

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

- c. US Patent No. 6748394
- d. US Patent No. 6618729
- e. US Patent No. 6389126
- f. US Patent No. 6753889
- g. US Patent No. 6611498
- h. US Patent No. 6668253
- i. US Patent No. 6058391
- j. US Patent No. 6411961
- k. US Patent No. 5819086
- l. US Patent No. 5701453

Art Unit: 2177

m. Michael K et al., The translation of star schema into entity-relationship diagrams, DEXa workshop, 1997, pp1-28


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is (703) 308-8538. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time. The TC2100's Customer Service number is (703) 306-5631.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached on (703) 305-9790. The fax phone numbers for the organization where the application or proceeding is assigned are as follows:

703/872-9306

(Official Communications)

Any inquiry of general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-9600.

sc 
Patent Examiner.
August 11, 2004.